

Page 1, amend paragraph 1 to read as follows:

TITLE OF THE INVENTION

METHOD AND DEVICE FOR SECURING HORIZONTALLY LOADED
CARGO UNITS TO A VESSEL

FIELD OF THE INVENTION

The present invention relates to an apparatus and method for securing horizontally loaded
cargo units to a vessel.

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Please amend page 1, paragraph 2, to read as follows:

BACKGROUND OF THE INVENTION

As known in prior art, units moving on wheels are secured on a horizontally loaded vessel, in particular semitrailers, rolltrailers and cassettes are secured on a ro-ro vessel, by using different chains, webbings and wires, by means of which each cargo unit is fastened to the deck of the vessel. One problem in using chains, webbings and wires for lashing the cargo unit to the deck of the vessel is that, when these are used, the unit lashed to the deck together with lashings and the deck structure does not necessarily always form a continuous structure of sufficient strength, which might result in the shifting of cargo in the cargo space in case the number or the quality of lashings is inadequate. A problem with these known lashings is also that the lashing is done by hand, which is in itself rather expensive and time-consuming.

Amend page 3, first full paragraph to read as follows:

OBJECTS AND SUMMARY OF THE INVENTION

When handling a unit moving in a horizontal plane, for example, a trailer, rolltrailer, etc., it is essentially important in securing the cargo unit on a vessel that it could be locked to the vessel such as to achieve a continuous structure that is as rigid as possible. Thus, one object of the invention is to provide an arrangement which when it is used allows securing to be accomplished such that the cargo unit forms a rigid continuous structure together with the vessel, and also to provide a securing system by means of which the movements of the cargo unit secured are prevented transversely in particular but also longitudinally with respect to the sailing direction of the vessel.

SECRET

When handling a unit moving in a horizontal plane, for example, a trailer, rolltrailer, etc., it is essentially important in securing the cargo unit on a vessel that it could be locked to the vessel such as to achieve a continuous structure that is as rigid as possible. Thus, one object of the invention is to provide an arrangement which when it is used allows securing to be accomplished such that the cargo unit forms a rigid continuous structure together with the vessel, and also to provide a securing system by means of which the movements of the cargo unit secured are prevented transversely in particular but also longitudinally with respect to the sailing direction of the vessel.

Please delete paragraphs three and four of page four.

Marked-up version of page four as amended.

[With a view to achieving the objectives stated above as well as those that will come out later, the method according to the invention is mainly characterized in what is set forth in the characterizing clause of claim 1.]

[The device according to the invention is in turn mainly characterized in what is set forth in the characterizing clause of claim 9.]

FOOT-06/2260

Amend page 6, paragraph 2, to read as follows.

BRIEF DESCRIPTION OF THE DRAWINGS

In the following, the invention will be described in more detail with reference to the figures in the accompanying drawing, to the details of which the invention is not by any means intended to be narrowly confined.

94
FIGURES 1A-1J show schematic embodiment examples of the securing element in accordance with the invention.

FIGURE 2 is a schematic illustration of a device according to one application of the invention for use in connection with a semitrailer.

FIGURES 3A-3B schematically show handling and securing of a semitrailer when the invention is applied.

FIGURE 4 schematically shows handling and securing of a rolltrailer when the invention is applied.

FIGURE 5 schematically shows handling and securing of a cassette when the invention is applied.

Marked-up version of page 2, paragraph 1, as amended.

--BRIEF DESCRIPTION OF THE DRAWINGS--

In the following, the invention will be described in more detail with reference to the figures in the accompanying drawing, to the details of which the invention is not by any means intended to be narrowly confined.

Figures 1A-1J show schematic embodiment examples of the securing element in accordance with the invention.

Figure 2 is a schematic illustration of a device according to one application of the invention for use in connection with a semitrailer.

Figures 3A-3B schematically show handling and securing of a semitrailer when the invention is applied.

Figure 4 schematically shows handling and securing of a rolltrailer when the invention is applied.

Figure 5 schematically shows handling and securing of a cassette when the invention is applied.

Amend the paragraph bridging pages 6 and 7 to read as follows.

DETAILED DESCRIPTION OF THE INVENTION

As schematically shown in Fig. 1A, a securing element 10 according to the invention comprises two securing parts 11,12, which have been shaped so as to mate with each other such that, when placed one upon the other in the manner shown by the arrow S, they form a securing element 10 of the tongue-and-groove type providing an interlocking coupling. When the securing element 10 is used on a vessel, a first securing part 11 is preferably fixed to a longitudinal bulkhead 15 of the vessel and a respective second securing part 12 is fixed to a cargo unit 13 which is to be secured and on the other side of which there is again similarly a first securing part 11, and in the next cargo unit 13 there is a respective second securing part 12. The respective securing parts 11,12 are coupled to each other, thereby forming a securing arrangement provided by means of the securing element 10. The securing parts 11,12 located on the cargo unit 13 are placed on either longitudinal side of the cargo unit 13. The securing element 10 additionally includes a locking arrangement formed on the securing parts 11,12 in order to prevent the longitudinal movement of the cargo units 13, which locking arrangement is accomplished in Fig. 1A by means of a locking groove 16 made into one securing part 12 and by means of a locking piece 17 provided on the respective other securing part 11. The securing parts 11, 12 of the securing element 10 are simultaneously positioned in place by means of this locking 16,17 which prevents longitudinal movement. Furthermore, a second locking arrangement is provided in connection with the securing element 10 in order to prevent the vertical movement of the cargo units 13, for example, a locking pin 18 in connection with one securing part 12 and a locking hole 19 in connection with

95

the respective other securing part 11.

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Marked-up version of paragraph bridging pages 6 and 7, as amended.

--DETAILED DESCRIPTION OF THE INVENTION--

As schematically shown in Fig. 1A, a securing element 10 according to the invention comprises two securing parts 11,12, which have been shaped so as to mate with each other such that, when placed one upon the other in the manner shown by the arrow S, they form a securing element 10 of the tongue-and-groove type providing an interlocking coupling. When the securing element 10 is used on a vessel, a first securing part 11 is preferably fixed to a longitudinal bulkhead 15 of the vessel and a respective second securing part 12 is fixed to a cargo unit 13 which is to be secured and on the other side of which there is again similarly a first securing part 11, and in the next cargo unit 13 there is a respective second securing part 12. The respective securing parts 11,12 are coupled to each other, thereby forming a securing arrangement provided by means of the securing element 10. The securing parts 11,12 located on the cargo unit 13 are placed on either longitudinal side of the cargo unit 13. The securing element 10 additionally includes a locking arrangement formed on the securing parts 11,12 in order to prevent the longitudinal movement of the cargo units 13, which locking arrangement is accomplished in Fig. 1A by means of a locking groove 16 made into one securing part 12 and by means of a locking piece 17 provided on the respective other securing part 11. The securing parts 11, 12 of the securing element 10 are simultaneously positioned in place by means of this locking 16,17 which prevents longitudinal movement. Furthermore, a second locking arrangement is provided in connection with the securing element 10 in order to prevent the vertical movement of the cargo units 13, for example, a locking pin 18 in connection with one securing part 12 and a locking hole 19 in connection with

the respective other securing part 11.

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